WHAT IS CLAIMED IS:

1.   An information processing method for calculating a first parameter used to transform a measured value of a sensor into a position and orientation of an image

5   sensing unit, comprising:

acquiring the measured value of the sensor upon adjusting the position and orientation of the image sensing unit to capture an image of a transmitter of the sensor in a real space; and

10   calculating said first parameter using the measured value of the sensor.

2.   The method according to claim 1, further comprising: superimposing a virtual image of the transmitter on a captured image on the basis of the

15   calculated first parameter; and

inputting a user's instruction associated with an adjustment value of the calculated first parameter, and updating the virtual image in accordance with the adjustment value.

20   3.   The method according to claim 2, further comprising setting a second parameter used to calculate a position and orientation of the transmitter on a world coordinate system in accordance with a user's manual instruction.

25   4.   The method according to claim 3, wherein the method optimizes a third parameter used to transform a measured value of the sensor into a position and

orientation of the image sensing unit on a world coordinate system using the set first and second parameters, and further comprises:

acquiring a captured image obtained by capturing

5   an image of the real space, where a plurality of markers whose world coordinate positions are known are laid out, using the image sensing unit, and a measured value of the sensor upon capturing the image;

detecting positions of markers included in the

10   captured image; and

optimizing the parameter using the measured value of the sensor, the positions of the detected markers, and the world coordinate positions of the detected markers.

15   5.   A program for making a computer implement an information processing method for calculating a first parameter used to transform a measured value of a sensor into a position and orientation of an image sensing unit, comprising:

20   a program of a step of acquiring the measured value of the sensor upon adjusting the position and orientation of the image sensing unit to capture an image of a transmitter of the sensor in a real space; and

25   a program of a step of calculating said first parameter using the measured value of the sensor.

6.   The program according to claim 5, further

comprising:

a program of superimposing a virtual image of the transmitter on a captured image on the basis of the calculated first parameter, and displaying the captured

5 image superimposed with the virtual image of the transmitter; and

a program of a step of inputting a user's instruction associated with an adjustment value of the calculated first parameter, and updating the virtual

10 image in accordance with the adjustment value.

7. An information processing apparatus for calculating a first parameter used to transform a measured value of a sensor into a position and orientation of an image sensing unit, comprising:

15 unit adapted to acquire the measured value of the sensor upon adjusting the position and orientation of the image sensing unit to capture an image of a transmitter of the sensor in a real space; and

unit adapted to calculated said first parameter

20 using the measured value of the sensor.

8. The information processing apparatus according to claim 7, further comprising:

unit adapted to superimpose a virtual image of the transmitter on a captured image on the basis of the

25 calculated first parameter, and display the captured image superimposed with the virtual image of the transmitter; and

unit adapted to input a user's instruction associated with an adjustment value of the calculated first parameter, and update the virtual image in accordance with the adjustment value.

5   9. A computer program product comprising a computer-readable medium having computer code for making a computer implement an information processing method for calculating a first parameter used to transform a measured value of a sensor into a position and

10   orientation of an image sensing unit, said product comprising:

     process procedure code for acquiring the measured value of the sensor upon adjusting the position and orientation of the image sensing unit to capture an

15   image of a transmitter of the sensor in a real space; and

     process procedure code for calculating said first parameter using the measured value of the sensor.